

Application No. 09/710,181  
Amendment "I" dated June 13, 2005  
Reply to Office Action mailed April 5, 2005

### **AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions, and listings, of claims in the application:

#### **Listing of Claims:**

Claims 1-40 (Cancelled).

41. (Previously Presented) A dental bleaching composition for bleaching and desensitizing a person's teeth, comprising:

a dental bleaching agent in an amount in a range of about 0.5% to about 50% by weight of the dental bleaching composition so as to have a tooth bleaching effect when contacted with a person's teeth, said dental bleaching agent comprising at least one peroxide;

potassium nitrate in a range of about 0.01% to about 2% by weight of the dental bleaching composition so as to result in reduced tooth sensitivity that may be caused by said dental bleaching agent in the absence of said potassium nitrate when the dental bleaching composition is contacted with a person's teeth for a time sufficient to bleach teeth; and

a carrier into which said dental bleaching agent and potassium nitrate are dispersed.

42. (Previously Presented) A dental bleaching composition as defined in claim 41, said dental bleaching agent comprising at least one of hydrogen peroxide, carbamide peroxide, sodium perborate, benzoyl peroxide, or glycerol peroxide.

43. (Cancelled)

44. (Previously Presented) A dental bleaching composition as defined in claim 41, wherein said dental bleaching agent is included in a range of about 1% to about 30% by weight of the dental bleaching composition.

Application No. 09/710,181  
Amendment "I" dated June 13, 2005  
Reply to Office Action mailed April 5, 2005

45. (Previously Presented) A dental bleaching composition as defined in claim 41, wherein said dental bleaching agent is included in a range of about 3% to about 20% by weight of the dental bleaching composition.

46. (Previously Presented) A dental bleaching composition as defined in claim 41, wherein said potassium nitrate has a concentration of about 0.5% by weight of the dental bleaching composition.

47. (Previously Presented) A dental bleaching composition as defined in claim 41, said carrier comprising a polyol.

48. (Previously Presented) A dental bleaching composition as defined in claim 47, said polyol comprising at least one of glycerin, propylene glycol, polypropylene glycol, polyethylene glycol, erythritol, sorbitol, or mannitol.

49. (Previously Presented) A dental bleaching composition as defined in claim 47, said carrier further comprising a tackifying agent.

50. (Previously Presented) A dental bleaching composition as defined in claim 49, said tackifying agent comprising at least one of carboxypolymethylene, a gum, or a protein.

51. (Previously Presented) A dental bleaching composition as defined in claim 41, said carrier comprising water.

52. (Previously Presented) A dental bleaching composition as defined in claim 41, further comprising an antimicrobial agent that is at least one of chlorhexidine, tetracycline, cetyl pyridinium chloride, benzalkonium chloride, cetyl pyridinium bromide, methyl benzoate, or propyl benzoate.

Application No. 09/710,181  
Amendment "I" dated June 13, 2005  
Reply to Office Action mailed April 5, 2005

53. (Previously Presented) A dental bleaching composition as defined in claim 41, further comprising an anticariogenic agent that is at least one of sodium monofluorophosphate, sodium fluoride, or stannous fluoride.

54. (Previously Presented) A dental bleaching composition as defined in claim 41, further comprising at least one bleaching agent stabilizer that is at least one of EDTA, a salt of EDTA, adipic acid, succinic acid, citric acid, a nitrate of tin, or a phosphate of tin.

55. (Previously Presented) A dental bleaching composition as defined in claim 41, wherein the dental bleaching composition is free of abrasives.

56. (Previously Presented) A dental bleaching composition as defined in claim 41, wherein said potassium nitrate reduces sensitivity to at least one of hot or cold.

57. (Previously Presented) A dental bleaching composition as defined in claim 41, wherein said potassium nitrate reduces at least one of gum, tongue, or throat sensitivity.

58. (Previously Presented) A dental bleaching composition as defined in claim 41, wherein said potassium nitrate further enhances whitening of teeth by said dental bleaching agent.

59. (Previously Presented) A dental bleaching composition for bleaching and desensitizing a person's teeth, comprising:

a dental bleaching agent in an amount in a range of about 0.5% to about 50% by weight of the dental bleaching composition so as to have a tooth bleaching effect when contacted with a person's teeth, said dental bleaching agent comprising at least one peroxide;

potassium nitrate in a range of about 0.05% to about 1% by weight of the dental bleaching composition so as to result in reduced sensitivity that may be caused by said dental bleaching agent in the absence of said potassium nitrate when the dental bleaching

Application No. 09/710,181  
Amendment "I" dated June 13, 2005  
Reply to Office Action mailed April 5, 2005

composition is passively maintained in contact with a person's teeth for at least about 15 minutes without brushing or scrubbing; and

a carrier into which said dental bleaching agent and potassium nitrate are dispersed.

60. (Previously Presented) A dental bleaching composition as defined in claim 59, said dental bleaching agent comprising at least one of hydrogen peroxide or carbamide peroxide.

61. (Previously Presented) A dental bleaching composition as defined in claim 59, wherein said potassium nitrate has a concentration of about 0.5% by weight of the dental bleaching composition.

62. (Previously Presented) A dental bleaching composition as defined in claim 59, said carrier comprising a polyol and a tackifying agent.

63. (Previously Presented) A dental bleaching composition as defined in claim 59, further comprising at least one of an antimicrobial agent, an anticariogenic agent, or a bleaching agent stabilizer.

64. (Previously Presented) A dental bleaching composition as defined in claim 59, wherein the dental bleaching composition is free of abrasives.

65. (Previously Presented) A dental bleaching composition for bleaching and desensitizing a person's teeth, comprising:

a dental bleaching agent in an amount in a range of about 0.5% to about 50% by weight of the dental bleaching composition so as to have a tooth bleaching effect when contacted with a person's teeth, said dental bleaching agent comprising at least one peroxide;

potassium nitrate in an amount of about 0.5% by weight of the dental bleaching composition so as to result in reduced tooth sensitivity that may be caused by said dental

Application No. 09/710,181  
Amendment "I" dated June 13, 2005  
Reply to Office Action mailed April 5, 2005

bleaching agent in the absence of said potassium nitrate when the dental bleaching composition is contacted with a person's teeth for a time sufficient to bleach teeth; and  
a carrier into which said dental bleaching agent and potassium nitrate are dispersed.

66. (Previously Presented) A dental bleaching composition as defined in claim 65, said dental bleaching agent comprising at least one of hydrogen peroxide or carbamide peroxide.

67. (Previously Presented) A dental bleaching composition as defined in claim 65, said carrier comprising a polyol and a tackifying agent.

68. (Previously Presented) A dental bleaching composition as defined in claim 65, said carrier comprising water.

69. (Previously Presented) A dental bleaching composition as defined in claim 65, wherein the dental bleaching composition is free of abrasives.

70. (Previously Presented) A dental bleaching composition as defined in claim 65, wherein said potassium nitrate reduces sensitivity to at least one of hot or cold.

71. (Previously Presented) A dental bleaching composition as defined in claim 65, wherein said potassium nitrate reduces at least one of gum, tongue, or throat sensitivity.

72. (Previously Presented) A method for bleaching and desensitizing a person's teeth, comprising:

providing a dental bleaching composition comprising:

a dental bleaching agent in an amount in a range of about 0.5% to about 50% by weight of the dental bleaching composition so as to have a tooth bleaching effect when contacted with a person's teeth, said dental bleaching agent comprising at least one peroxide;

Application No. 09/710,181  
Amendment "1" dated June 13, 2005  
Reply to Office Action mailed April 5, 2005

potassium nitrate in a range of about 0.01% to about 2% by weight of the dental bleaching composition so as to result in reduced tooth sensitivity that may be caused by said dental bleaching agent in the absence of said potassium nitrate when the dental bleaching composition is contacted with a person's teeth for a time sufficient to bleach teeth; and

a carrier into which said dental bleaching agent and potassium nitrate are dispersed; and

contacting the person's teeth with said dental bleaching composition for a time sufficient to bleach teeth,

said potassium nitrate reducing tooth sensitivity that may be caused by said dental bleaching agent in the absence of said potassium nitrate.

73. (Previously Presented) A method as defined in claim 72, wherein contacting the person's teeth with said dental bleaching composition further comprises:

introducing a quantity of said dental bleaching composition into a dental tray; and  
placing the dental tray over the person's teeth in order for the dental bleaching composition to contact the person's teeth for the time sufficient to bleach teeth.

74. (Previously Presented) A method as defined in claim 73, wherein the dental tray remains in place over the person's teeth for at least about 15 minutes.

75. (Previously Presented) A method as defined in claim 73, wherein the dental tray remains in place over the person's teeth for at least about 1 hour.

76. (Previously Presented) A method as defined in claim 73, wherein the dental tray remains in place over the person's teeth for at least about 2 hours.

Application No. 09/710,181  
Amendment "I" dated June 13, 2005  
Reply to Office Action mailed April 5, 2005

77. (Previously Presented) A method for bleaching and desensitizing a person's teeth, comprising:

providing a dental bleaching composition comprising:

a dental bleaching agent in an amount in a range of about 0.5% to about 50% by weight of the dental bleaching composition so as to have a tooth bleaching effect when contacted with a person's teeth, said dental bleaching agent comprising at least one peroxide;

potassium nitrate in a range of about 0.05% to about 1% by weight of the dental bleaching composition so as to result in reduced tooth sensitivity that may be caused by said dental bleaching agent in the absence of said potassium nitrate when the dental bleaching composition is contacted with a person's teeth for a time sufficient to bleach teeth; and

a carrier into which said dental bleaching agent and potassium nitrate are dispersed; and

contacting the person's teeth with said dental bleaching composition for at least about 15 minutes without scrubbing or brushing,

said potassium nitrate reducing tooth sensitivity that may be caused by said dental bleaching agent in the absence of said potassium nitrate.

78. (Previously Presented) A method as defined in claim 77, wherein contacting the person's teeth with said dental bleaching composition further comprises:

introducing a quantity of said dental bleaching composition into a dental tray; and

placing the dental tray over the person's teeth for at least about 15 minutes in order for the dental bleaching composition to contact the person's teeth.

79. (Previously Presented) A method as defined in claim 78, wherein the dental tray remains in place over the person's teeth for at least about 1 hour.

80. (Previously Presented) A method as defined in claim 78, wherein the dental tray remains in place over the person's teeth for at least about 2 hours.

Application No. 09/710,181  
Amendment "I" dated June 13, 2005  
Reply to Office Action mailed April 5, 2005

81. (Previously Presented) A method for bleaching and desensitizing a person's teeth, comprising:

providing a dental bleaching composition comprising:

a dental bleaching agent in an amount in a range of about 0.5% to about 50% by weight of the dental bleaching composition so as to have a tooth bleaching effect when contacted with a person's teeth, said dental bleaching agent comprising at least one peroxide;

potassium nitrate in an amount of about 0.5% by weight of the dental bleaching composition so as to result in reduced tooth sensitivity that may be caused by said dental bleaching agent in the absence of said potassium nitrate when the dental bleaching composition is contacted with a person's teeth for a time sufficient to bleach teeth; and

a carrier into which said dental bleaching agent and potassium nitrate are dispersed; and

contacting the person's teeth with said dental bleaching composition for a desired time period,

said potassium nitrate reducing tooth sensitivity that may be caused by said dental bleaching agent in the absence of said potassium nitrate.

82. (Previously Presented) A method as defined in claim 81, wherein contacting the person's teeth with said dental bleaching composition further comprises:

introducing a quantity of said dental bleaching composition into a dental tray; and

placing the dental tray over the person's teeth in order for the dental bleaching composition to contact the person's teeth for the time sufficient to bleach teeth.

83. (Previously Presented) A method as defined in claim 82, wherein the dental tray remains in place over the person's teeth for at least about 15 minutes.

84. (Previously Presented) A method as defined in claim 82, wherein the dental tray remains in place over the person's teeth for at least about 1 hour.



Application No. 09/710,181  
Amendment "I" dated June 13, 2005  
Reply to Office Action mailed April 5, 2005

85. (Previously Presented) A method as defined in claim 82, wherein the dental tray remains in place over the person's teeth for at least about 2 hours.

86. (Previously Presented) A dental bleaching composition for bleaching and desensitizing a person's teeth, comprising:

a dental bleaching agent in an amount in a range of about 0.5% to about 50% by weight of the dental bleaching composition so as to have a tooth bleaching effect when contacted with a person's teeth, said dental bleaching agent comprising at least one peroxide;

potassium nitrate in a range of about 0.01% to about 2% by weight of the dental bleaching composition so as to result in reduced tooth sensitivity that may be caused by said dental bleaching agent in the absence of said potassium nitrate when the dental bleaching composition is contacted with a person's teeth for a time sufficient to bleach teeth; and

a carrier into which said dental bleaching agent and potassium nitrate are dispersed, said carrier including a solvent together with a tackifying agent.

87. (Previously Presented) A dental bleaching composition as defined in claim 86, wherein said tackifying agent is selected from the group comprising carboxypolymethylene, polyacrylic acid copolymers, gums, polyethylene oxides, proteins, and mixtures thereof.

Claims 88-90 (Cancelled).